

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/843,743	SYO, TOSHIYUKI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hugh Jones	2128	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/6/2001.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☒ The drawings filed on 30 April 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>7/6/2001</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                               | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

**DETAILED ACTION**

1. Claims 1-15 of U.S. Application 09/843,743, filed 4/30/2001 are pending.

**Allowable Subject Matter**

2. Claims 1-15 are allowed over the prior art of record.
3. The following is an examiner's statement of reasons for allowance: The prior art of record does not disclose or suggest the "well-posed" limitation (see lines 18-23 of page 54, for example), which follows the "evaluation" limitation, as defined in the specification, and in the context of the claims.
4. The closest prior is exemplified by US patent 6,678,642 (Budge) which discloses a method and apparatus for modeling interactions can accurately model tribological and other properties and accommodate topological disruptions. Two portions of a problem space are represented, a first with a Lagrangian mesh and a second with an ALE mesh. The ALE and Lagrangian meshes are constructed so that each node on the surface of the Lagrangian mesh is in a known correspondence with adjacent nodes in the ALE mesh. The interaction can be predicted for a time interval. Material flow within the ALE mesh can accurately model complex interactions such as bifurcation. After prediction, nodes in the ALE mesh in correspondence with nodes on the surface of the Lagrangian mesh can be mapped so that they are once again adjacent to their corresponding Lagrangian mesh nodes. The ALE mesh can then be smoothed to reduce mesh distortion that might reduce the accuracy or efficiency of subsequent prediction steps.

The process, from prediction through mapping and smoothing, can be repeated until a terminal condition is reached.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be:

**directed to:**

Dr. Hugh Jones telephone number (703) 305-0023, Monday-Thursday 0830 to 0700 ET, *or* the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

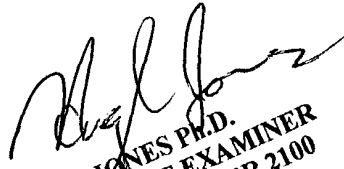
**mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 308-9051 (for formal communications intended for entry)  
*or* (703) 308-1396 (for informal or draft communications, please label "*PROPOSED*" or "*DRAFT*").

Dr. Hugh Jones  
Primary Patent Examiner  
August 22, 2004

  
HUGH JONES P.D.  
PRIMARY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

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